**What role do preventative actions play in enhancing the wellbeing of the athlete?**

Insert school logo or image instead of this box.

**Flipped Learning Booklet**

**Write your name here.**

2016-17

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# Key Term Definitions

Complete the table below as you progress through this critical question.

|  |  |  |  |
| --- | --- | --- | --- |
| **WORD** | **DEFINITION** | **EXAMPLE** | **NON-EXAMPLE** |
| static stretch |  |  |  |
| radiation |  |  |  |
| proprioceptive neuromuscular stretching (PNF) |  |  |  |
| conduction |  |  |  |
| hyperthermia |  |  |  |
| convection |  |  |  |
| hypothermia |  |  |  |
| vasodilatation |  |  |  |
| pre-screen |  |  |  |
| evaporation |  |  |  |
| dehydration |  |  |  |
| acclimatisation |  |  |  |
| vasoconstriction |  |  |  |

# Physical Preparation

|  |  |
| --- | --- |
| **Students learn about:** | **Students learn to:** |
| * physical preparation
* pre-screening
* skill and technique
* physical fitness
* warm up, stretching and cool down
 | * analyse different sports in order to determine priority preventative strategies and how adequate preparation may prevent injuries
 |

## Content

**Video** *Physical Preparation* [here](https://youtu.be/-m-DJObjCeI?list=PLesvqngPCeVM83T9yIZXK3la6P4i6fxFy).

**Reading** [pdhpe.net](https://www.pdhpe.net/sports-medicine/what-role-do-preventative-actions-play-in-enhancing-the-wellbeing-of-the-athlete/physical-preparation/)

 Relevant section of your textbook (Cambridge, Outcomes, etc)

## Cornell Note Taking Method

*These notes can be done in the booklet or in a separate exercise book (replace the words in the scaffold).*

|  |
| --- |
| Name, Date, Topic, Class |
| **CUES**Written after the video and classMain ideasQuestions that connect pointsVocabulary wordsUsed for review and study | **NOTES**Taken During the video* Main points
* Bullet points
* Diagrams/charts
* Abbreviate
* Paraphrase
* Outlines

Leave space between topicsAny Questions you still have. |
| **SUMMARY**Written straight after the video. (Checked in class)Brief summary highlighting the main points on the page.Used to find info later. |

## Pre-Screening (H/W)

Use the [link](https://www.essa.org.au/wp/wp-content/uploads/Screen-tool-version-v1.1.pdf) to pre-screen one of your parents or grandparents. Discuss the results with them in relation to how screening can prevent injury.

**Record discussion notes here.**

## Stretching to prevent injury

Use the following article and the links within it to identify the pros and cons of stretching during a warm up.

* <http://well.blogs.nytimes.com/2011/06/22/to-stretch-or-not-to-stretch/?_r=1>

|  |  |
| --- | --- |
| **Pros:** | **Cons**: |

## Learn to Activity

* 1. Identify the key components of fitness for the following sports:

|  |  |  |
| --- | --- | --- |
| **Sport** | **Key components of fitness** | **Why?** |
| Gymnastics |  |  |
| Golf |  |  |
| Rugby League |  |  |
| Cricket |  |  |
| Other… |  |  |

* 1. Determine priority preventative strategies for the following sports:

|  |  |  |
| --- | --- | --- |
| **Sport** | **Priority preventative strategies** | **Why is this a priority for this sport?** |
| Gymnastics |  |  |
| Golf |  |  |
| Rugby League |  |  |
| Cricket |  |  |
| Other… |  |  |

* 1. Choose 2 sports and explain how adequate preparation may prevent injuries.

Sport 1 insert sport

|  |  |
| --- | --- |
| **Cause/preparation** | **Effect/ How it prevents injuries** |
|  |  |
|  |  |
|  |  |

Sport 2 insert sport

|  |  |
| --- | --- |
| **Cause/preparation** | **Effect/ How it prevents injuries** |
|  |  |
|  |  |
|  |  |

## Sample answer

1. Read through the sample answer to the past HSC question and identify the SEAL/SEXY/PEEL structure (highlight each section a different colour).

*2012 Question 31 (a) Explain the physical preparation needed by an athlete in order to prevent injury. In your answer, provide examples from different sports.* ***8 Marks***

Physical preparation is a vital element of an athlete’s wellbeing. Appropriate physical preparations such as pre-screening, having skill and technique, level of physical fitness and following adequate warm up, stretching and cool-down procedures are major factors in the prevention of sport injuries.

Pre-screening provides information about the health status of an individual before they begin a training program. Pre-screening questionnaires provide valuable information about the history, capabilities and any pre-existing medical conditions of the person. By understanding the limitations of the athlete, an appropriate exercise program can be devised which in turn will avoid muscle soreness, loss of motivation or an occurrence of an injury.

Skill and technique relate to the efficiency with which we perform required activities. Incorporating good technique during training when developing skill will not only improve performance but also reduce the risk of injury. For example, the footballer who is unsure of correct tackling technique is at risk each time they make a tackle. Therefore, as an athlete’s skill development and technique increase, they will become more experienced in playing situations and so will reduce the incidence of injury.

Physical fitness is another area of physical preparation that can assist an athlete reduce the likelihood of injury. When an athlete has a good level of physical fitness, they are able to cope with the demands of sport more effectively and thus minimise injury. However, lack of development of an appropriate level of fitness is a contributing factor to injury. As the body gets tired, good skill and correct technique disappear and poor technique leads to greater injuries. Eg, a netball player after a 3-month break goes for an intercept and rolls her ankle.

Adequate warm up, stretching and cool down are important in enhancing performance and preventing injury. A warm up increases the muscle elasticity and the range of motion around a joint which reduces the risk of sprains and strains. Stretching programs can be static, PNF and dynamic. The most common combination during a warm up is PNF and dynamic. It is essential that the muscle groups that have the greatest demands placed upon them during performance are given specific attention. An example of this is a long jumper who gives specific and additional attention to the calf and thigh muscle groups. A cool down is essential as it allows the body to adjust from intense activity back to a normal pre-exercise state. A proper cool down will reduce muscle soreness and tightness and will therefore allow the athlete to recover more quickly and thus reduce injury.

1. Mark the above answer using the marking criteria below. You will need to justify the mark you give.
	1. Read through the answer and underline where the relationship between physical preparation and injury prevention has been made evident/clear.
	2. Read through and make bold/circle the examples. Check they are from **different** sports.

|  |  |
| --- | --- |
| **Criteria** | **Marks** |
| * Makes evident the relationship between physical preparation and injury prevention in different sports
* Communicates ideas and information using relevant examples from different sports
 | 8 |
| * Provides characteristics and features of how physical preparation can prevent injury in different sports
* Communicates ideas and information using relevant examples from different sports
 | 6–7 |
| * Sketches in general terms the physical preparation and injury prevention in a sport
* Uses examples
 | 4–5 |
| * Sketches in general terms physical preparation or injury prevention in a sport
* May provide examples
 | 2–3 |
| * Provides some relevant information about physical preparation or sports injury prevention
 | 1 |

|  |
| --- |
| **Record your mark and justification here.*** 1. Mark: \_\_\_\_\_\_\_
	2. Justification
 |

## Past/Practice HSC Questions

1. Analyse a sport of your choice and how physical preparation may prevent injury. **12 marks** (use the scaffold if you need to)

Plan your answer below and then write it.

|  |  |  |  |
| --- | --- | --- | --- |
| Issues | Issue | Issue | Issue |
|  |  |  |  |

Relationship between implications:

**Scaffold for analyse**

*Analyse*– identify components and the relationship between them; draw out and relate implications.

|  |  |
| --- | --- |
| Topic to be analysed:  | **Tips for writing**Statement of topic which reflects how deeply you have thought about the question. Preview of components and the relationships.  |
| Component:Elaborate:Support with example/s:Component:Elaborate:Support with example/s: | Topic sentence at the beginning of each paragraph followed by explanations and examples to illustrate each component Identifying and explaining the relationship between the various components is essential in answering these questions. Use linking words between each point such as *therefore, thus, as a result, leading to*, in order to illustrate the relationship between each of the components.  |
| RelationshipPointElaborate:Support with example/s:Link: |
| Component:Elaborate:Support with example/s:Component:Elaborate:Support with example/s: |
| RelationshipPointElaborate:Support with example/s:Link: |
| Implications of the relationship between each of these components:  | The implications of the relationship (what happens, what effect it has) can be dealt with in each of the paragraphs or as a concluding paragraph.  |

1. How does physical preparation help to decrease the risk of injury? **8 marks** (use the scaffold if you need to)

|  |
| --- |
| **Introduction:** |
| **Topic** | **Paragraph** |
|  | Statement: |
| Expand/Explain:  |
| Apply/Example: |
| Link/Why: |
|  | Statement: |
| Expand/Explain:  |
| Apply/Example: |
| Link/Why: |
|  | Statement: |
| Expand/Explain:  |
| Apply/Example: |
| Link/Why: |
| **Conclusion:** |

1. **Create your own question (including mark allocation) for this dot point and answer it or your friends question.**

# Sports Policy and the Sports Environment

|  |  |
| --- | --- |
| **Students learn about:** | **Students learn to:** |
| * sports policy and the sports environment
* rules of sports and activities
* modified rules for children
* matching of opponents, eg growth and development, skill level
* use of protective equipment
* safe grounds, equipment and facilities
 | * critically analyse sports policies, rules and equipment to determine the degree to which they promote safe participation, eg heat rules, rugby union scrum rules
 |

## Content

**Video** *Sports Policy and the Sports Environment* [here](https://youtu.be/-NupYm_O0KM?list=PLesvqngPCeVM83T9yIZXK3la6P4i6fxFy).

**Reading** [pdhpe.net](https://www.pdhpe.net/sports-medicine/what-role-do-preventative-actions-play-in-enhancing-the-wellbeing-of-the-athlete/sports-policy-and-the-sports-environment/)

 Relevant section of your textbook (Cambridge, Outcomes, etc)

## Cornell Note Taking Method

*These notes can be done in the booklet or in a separate exercise book (replace the words in the scaffold).*

|  |
| --- |
| Name, Date, Topic, Class |
| **CUES**Written after the video and classMain ideasQuestions that connect pointsVocabulary wordsUsed for review and study | **NOTES**Taken During the video* Main points
* Bullet points
* Diagrams/charts
* Abbreviate
* Paraphrase
* Outlines

Leave space between topicsAny Questions you still have. |
| **SUMMARY**Written straight after the video. (Checked in class)Brief summary highlighting the main points on the page.Used to find info later. |

## Determining the degree to which

1. Complete the table from your notes above.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **How do they promote safe participation** | **How well do they promote safety** | **How do you know this? Provide evidence/research** |
| Rules of sports and activities |  |  |  |
| Modified rules for children |  |  |  |
| Matching of opponents |  |  |  |
| Use of protective equipment |  |  |  |
| Safe grounds, equipment and facilities |  |  |  |

1. Finish the sentences below to turn the above table notes into sentences that could be used to answer HSC questions.

|  |
| --- |
| Rules of sports and activities greatly/partially/do not promote safe participation in sport because…This is further evidenced by… |
| An example of a rule modified for children is… , which promoted safety due to… |
| In **ENTER SPORT** opponents are matched by… This promotes safety in the sport through… |
| Protective equipment such as… in **ENTER SPORT** greatly promotes player safety in sport. This is clearly evident because… |
| Safe grounds, equipment and facilities can help to promote player safety. An example includes…Player safety is thus promoted as a result of… |

## Practical activity

1. Go to the school sports storeroom and identify the range of equipment that promotes safe participation, and which sport it is for.

|  |  |  |
| --- | --- | --- |
| Equipment | How it promotes safety | Sport  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

1. Ask your teacher for school policies that are used to promote safety in sport within the school, and discuss how they are implemented and whether they do promote safety or not. If the school does not have these readily available, develop your own, or go [here](http://www.sports.det.nsw.edu.au/spguide/activities/) and pick one.

**Notes from discussion/or your own policies**

## Learn to Activity

Read the following article on [critically](https://www.pdhpe.net/key-word-critically/) and [analyse](https://www.pdhpe.net/key-word-analyse/) and then do the following activities.

1. Use this [link](https://www.mja.com.au/journal/2004/181/1/spinal-injuries-rugby-union-1970-2003-lessons-and-responsibilities) to *critically analyse* the introduction of “crouch-touch-pause-engage” rule in rugby union.

|  |  |  |  |
| --- | --- | --- | --- |
| Issues | Issue | Issue | Issue |
|  |  |  |  |

Relationship between implications:

***AS PER ANALYSE/ASSESS/EVALUATE/EXAMINE***

**THEN ADD:**

Questioning

Reflection

Argument

Judgment

Overall case

1. Use this [link](https://www.pdhpe.net/wp-content/uploads/2015/12/Rules-of-sport-and-activity-beat-the-heat-SMA.pdf) and this [link](http://www.tennis.com.au/leganatc/files/2012/12/3g.-Heat-policy.pdf) to critically analyse the heat policy in tennis.

|  |  |  |  |
| --- | --- | --- | --- |
| Issues | Issue | Issue | Issue |
|  |  |  |  |

Relationship between implications:

***AS PER ANALYSE/ASSESS/EVALUATE/EXAMINE***

**THEN ADD:**

Questioning

Reflection

Argument

Judgment

Overall case

## Past/Practice HSC Questions

1. 2010 Question 29 (b) [Evaluate](https://www.pdhpe.net/key-word-evaluate/) how sports policy and the sport environment promote safe participation.  **12 Marks** (Use the scaffold if you need to)

**Scaffold for critically evaluate**

*Critically evaluate* – add a degree or level of accuracy, depth, knowledge and understanding, logic, questioning, reflection and quality to *evaluate.*

*Evaluate* - make a judgement based on criteria; determine the value of.

|  |  |
| --- | --- |
| Topic to be evaluated:  | **Tips for writing**Statement of topic to be critically evaluated. Preview of points for and against and concluding judgement.  |
| Point for:Elaborate:Support with examples:Link: | Topic sentence at the beginning of each paragraph followed by explanation and examples to illustrate point. Points could also be advantages and disadvantages instead of for and against. Use linking words (such as: therefore, because, however, for instance, for example, as a result). Criteria used to make a judgement could be used during the points for and against to illustrate unclear reference more clearly.  |
| Point for:Elaborate:Support with examples:Link: |
| Point against:Elaborate:Support with examples:Link: |
| Point against:Elaborate:Support with examples:Link: |
| Criteria used to assess points for and against: |
| Conclusion and **judgment**: | Brief summary of points for and against. Must make a judgement at the end either for OR against the argument and draw conclusions regarding about support for or against issue through the use of a criteria.  |

|  |  |
| --- | --- |
| **Criteria** | **Marks** |
| * Demonstrates a thorough knowledge and understanding of sports policy and sports environment
* Makes a judgement about the effectiveness of sports policy and the sports environment in promoting safe participation
* Uses relevant examples
* Presents ideas in a logical and cohesive way
 | 10–12 |
| * Demonstrates a sound understanding of sports policy and sports environment
* Explains effectiveness of sports policy and sports environment in promoting safe participation

OR * Describes sports policy and/or sports environment and provides some links to safe participation in sport
* Uses relevant examples
* Presents ideas clearly
 | 7–9 |
| * Sketches in general terms sports policy and/or sports environment
* Uses examples
 | 4–6 |
| * Provides some relevant information about sport safety
 | 1–3 |

**Feedback**

* Use the marking criteria above to mark your own or a friends answer and provide feedback on what they did well and what they need to do to improve. (you can also find a sample answer [here](https://www.boardofstudies.nsw.edu.au/hsc_exams/hsc2010exams/pdf_doc/pdhpe-sample-answers-10.pdf) if you need it.
1. 2015 Question 31 (b) To what extent do specific sports’ policies promote safe participation? **12 Marks**

**See if you can answer it without a scaffold. Remember to use SEAL/SEXY/PEEL structure and to MAKE a JUDGEMENT!**

|  |  |
| --- | --- |
| **Criteria** | **Marks** |
| * Makes clear judgement(s) on how sports policies can promote safe participation
* Makes evident the relationship between sports policies and safe participation
* Provides relevant **examples** **[plural]**
 | 11–12 |
| * Provides clear reasons showing how sports policies can promote safe participation
* Provides characteristics and features of effective sports policies that promote safe participation
* Provides relevant examples
 | 8–10 |
| * Provides characteristics or features of sports policies that promote safe participation
* Provides examples
 | 5–7 |
| * Sketches in general terms the features of sports policies that promote safe participation
* Provides an example
 | 3–4 |
| * Provides some relevant information regarding safe participation in sport and a sports policy
 | 1–2 |

**Feedback**

* Use the marking criteria above to mark your own or a friends answer and provide feedback on what they did well and what they need to do to improve. A sample answer is also provided below.

**Sample answer: (Highlight the syllabus dot points)**

Sports policies and rules, safe grounds, equipment and facilities, modified rules for children, matching of opponents and use of protective equipment are all important considerations for optimising the safety of athletes when competing in sport.

Rules of sport assist the flow of the game and protect participants from injury. They are enforced on the field by the referee or umpire to promote safety within the game or by the governing bodies of the sport. Injury has the potential to seriously harm athletes and lead to lengthy periods of time on the sideline, so injury prevention is of paramount importance for both coaches and athletes. Some rules that exist in sport include the head high tackle rule in rugby league which ensures head injuries and concussions are reduced, no lifting above the horizontal in tackles and hockey goal keepers having to wear protective gear before being allowed to take the field of play. Players failing to comply with these rules have serious consequences enforced upon them, including lengthy suspensions from the game through governing bodies like the NRL judiciary. There are also policies that have been implemented to enhance player safety, eg the Australian Open heat policy, which acknowledges the risk of heat illness when competing in excessive temperatures. This heat policy allows players to take extra breaks for fluids and no new games are to begin if the wet bulb globe reaches a pre­ determined level. Therefore, it can be seen that the rules of sport ensure player safety to a significant extent.

Major modifications have been made to junior sports to ensure the safety and continued participation of children in sporting contexts. Such changes are necessary to cater to their stature and limited capabilities and children have specific needs in terms of equipment size, court dimensions, rules and playing environment. When these are suited to their needs, it adds to their potential to learn new skills and enjoy sport. For example, lowering the backboard in basketball to enhance the chance of successful shooting, using t-ball stands in softball to make ball contact easier and using smaller playing areas in soccer. It is evident that modifying rules for children plays a significant role in promoting enjoyment, and ensuring their continued involvement in the sport safely.

Matching of opponents is a concept that is widely acknowledged to enhance safety and enthusiasm for sports participation. Most of these modifications have been confined to contact sports (eg rugby league), but now include sports such as hockey and cricket, where larger children can bowl faster or hit harder. Competitions that are even are more desirable at all levels of junior sport and should consider the size, gender, strength, psychological development and skill level of competitors. When competitors are not evenly matched, children quickly lose interest. However, when competitors are more evenly matched, injury is less likely and interest is heightened. Therefore, it is much more desirable for competitors to match their skills against opponents of similar ability and enjoy competition for its own sake.

Protective equipment is crucial in sports where the risk of injury is high due to contact. All equipment must protect the wearer and other players, allow freedom of movement, air flow and be comfortable. Many team sports encourage at least one item of protective equipment such as shin pads in soccer, mouth guards in football and helmets in cricket. When correct protective equipment is worn, both the athlete and fellow competitors’ safety is significantly enhanced.

It is evident that sports policies must be implemented in sport to ensure the safety and continued participation of athletes.

# Environmental Considerations

|  |  |
| --- | --- |
| **Students learn about:** | **Students learn to:** |
| * environmental considerations
* temperature regulation (convection, radiation, conduction, evaporation)
* climatic conditions (temperature, humidity, wind, rain, altitude, pollution)
* guidelines for fluid intake
* acclimatisation
 | * evaluate strategies an athlete could employ to support the body’s temperature regulation mechanisms
* analyse the impact of climatic conditions on safe sports participation
 |

## Content

**Video** *Environmental Considerations* [here](https://youtu.be/7z-MNuqVMAw?list=PLesvqngPCeVM83T9yIZXK3la6P4i6fxFy).

**Reading** [pdhpe.net](https://www.pdhpe.net/sports-medicine/what-role-do-preventative-actions-play-in-enhancing-the-wellbeing-of-the-athlete/environmental-considerations/)

 Relevant section of your textbook (Cambridge, Outcomes, etc)

## Cornell Note Taking Method

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| --- |
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* Bullet points
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* Abbreviate
* Paraphrase
* Outlines

Leave space between topicsAny Questions you still have. |
| **SUMMARY**Written straight after the video. (Checked in class)Brief summary highlighting the main points on the page.Used to find info later. |

## Teacher note

The syllabus has the following teacher note for this dot point:

|  |
| --- |
| **Teacher Note:** Students should understand how the combination of heat and humidity or cold and wind increases the likelihood of hyperthermia and hypothermia respectively. |

1. Complete the table below considering how each climatic conditions affect each of the thermoregulation mechanisms.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Convection** | **Radiation** | **Conduction** | **Evaporation** |
| **Hot** | *Convection adds heat to the body due to a warm environment* |  |  |  |
| **Humid** |  |  |  |  |
| **Cold** |  |  |  |  |
| **Windy** |  |  |  |  |
| **Rain** |  |  |  | *Very ineffective due to high humidity* |

1. Construct a paragraph that explains **why** a hot humid environment increases the likelihood of hyperthermia. (PEAL/SEXY/PEEL)
2. Construct a paragraph that explains **why** a cold windy environment increases the likelihood of hypothermia. (PEAL/SEXY/PEEL)
3. Provide strategies (under each mechanism) an athlete could use in the following conditions and how the strategy helps to promote safety (avoid hyper/hypothermia)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Convection** | **Radiation** | **Conduction** | **Evaporation** |
| **Hot & Humid** |  |  |  |  |
| **Cold & Windy** |  |  |  |  |

1. Add another line (or 2) to your paragraphs above, for each condition, that provides strategies an athlete can use in these conditions that will promote their safety (include how it promotes safety)

**Hot & Humid**

*Example structure:* An athlete could use strategies such as… which help to remove heat by… respectively (*respectively means in matching order*).

**Cold & Windy**

## Videos

### Fluid intake/Hydration

Watch the video [here](https://youtu.be/nNvhDed6wTc?list=PLesvqngPCeVPrm3uuUUh23FC9CgOfbQPF) on hydration and add new notes to your Cornell method above.

### Acclimatisation

Watch the video [here](https://youtu.be/KUPNCBQw4o0?list=PLesvqngPCeVPrm3uuUUh23FC9CgOfbQPF) on hydration and add new notes to your Cornell method above.

## Learn to Activity

1. Complete the table on rain, altitude and pollution

|  |  |
| --- | --- |
|  | **Impact on safe sports participation** (include why? Ie add a because statement) |
| **Rain** |  |
| **Altitude** |  |
| **Pollution** |  |

### Key word – Evaluate

Read the article on the key word evaluate [here](https://www.pdhpe.net/key-word-evaluate/).

1. Define evaluate.
2. What terms/conjunctions might you use when answering an evaluate question?
3. What MUST you make sure you do when evaluating?

**Strategies**

1. Select 2 strategies from your table above on climatic conditions and guidelines for fluid intake, and provide a judgement as to whether they work and how you know this.

Strategy 1:

Strategy 2:

Guidelines for fluid intake:

## Sample Answer

Read through the sample answer below and:

* 1. Use the marking criteria to identify (colour code/underline/bold/circle etc)
		1. Each strategy provided
		2. Strengths and limitations of the strategies
		3. Connecting (conjunctions) that link the climatic conditions to performance
		4. Judgements made
		5. Sport specific examples
	2. Provide a mark for the answer and justify your mark.
	3. Suggest ways the answer can be improved.

|  |  |
| --- | --- |
| **Criteria** | **Marks**  |
| * Demonstrates thorough knowledge and understanding of a range of strategies to perform competitively in different climatic conditions
* Identifies strengths AND/OR limitations of strategies through health and physical activity concepts
* Links climatic conditions and effects on performance
* Makes a judgement on effectiveness of these strategies
* Uses relevant examples for each strategy
* Presents ideas in a logical and cohesive manner
 | 10–12 |
| * Demonstrates a sound understanding of a range of strategies to compete in different climatic conditions
* Identifies and links strengths of such strategies
* Links climate and effects on performance
* Determines the value of some strategies
* Presents ideas clearly
* Uses relevant examples
 | 7–9 |
| * Demonstrates a limited understanding of strategies to compete in different climatic conditions

AND/OR * Describes a range of strategies for climatic conditions
* Uses examples
 | 4–6 |
| * Recognises or names a range of strategies for managing climatic conditions

AND/OR * Provides some relevant information about sport and climatic conditions
 | 1–3 |

2011 Question 29 (b) Evaluate strategies athletes use in order to perform competitively in different climatic conditions. **12 Marks**

**Sample answer:**

The human body produces a lot of heat during exercise, and loses this heat mainly through the evaporation of sweat from the skin. Evaporation is the process of converting liquid to gas. On hot and humid days, temperature control becomes more difficult – it is more difficult to cool the body by evaporation because the air is already saturated with water, which reduces the body’s capacity for evaporation.

The heat produced in the body during exercise must be lost or serious problems can occur. When the body’s core temperature moves outside of an acceptable range, the body’s capacity to perform will be reduced. Athletes are commonly affected by heat or cold illness. If not managed promptly and appropriately, these illnesses can become serious.

In cooler climates, heat loss is not usually a problem; however, if it is very cold, the body may not produce enough heat to keep the core temperature within an acceptable range.

Airflow across the body results in heat loss by convection. Cold, windy conditions increase heat loss by convection. Athletes should be aware of the increased potential for heat loss by this method when exercising in these conditions. Clothing also influences heat transfer by convection.

Heat can radiate from a warm object to a cooler one. In a cold climate, an athlete will radiate heat to the environment surrounding them. During exercise on a warm day, an athlete will absorb heat from the surrounding environment.

Heat is also transferred when two objects of different temperatures contact each other; for example an athlete will lose heat to the environment on a cold morning. Conduction is particularly important when exercising in water. Water is an effective conductor of heat; therefore, body heat will be lost very quickly in cool water.

If athletes are training in hot conditions, or travelling to a hot climate, they should allow for a seven to 10-day acclimatisation period, which is needed for the body temperature regulation system to adapt to the hotter conditions. Fluid replacement is very important when exercising in hot conditions. Once acclimatised, a fitter person will sweat sooner and more, and lose less salt in sweating than a less fit person. The fluid lost must be regularly replaced to allow the cooling process to continue.

Wearing appropriate clothing is another important strategy athletes can use when exercising in hot and humid conditions. Athletes should try to wear a minimal amount of light-coloured and loose-fitting clothing, which also allows for adequate ventilation in order for sufficient evaporation to occur.

Additional strategies that an athlete may utilise in order to allow cooling to occur during competition and training are:

* + exposing as much of the body surface as possible during breaks in play
	+ putting ice in the armpits, neck and groin during breaks in play
	+ using fans and shade during breaks in play.

Having longer breaks in play and shorter periods of play during extremes in temperature may assist. Introducing more drink carriers in particularly hot and humid conditions, or utilising ice jackets where available, can help.

## Past/Practice HSC Questions

1. Analyse the impact rain can have on the safety of the athlete. **5 marks**

**Scaffold for analyse**

*Analyse*– identify components and the relationship between them; draw out and relate implications.

|  |  |
| --- | --- |
| Topic to be analysed:  | **Tips for writing**Statement of topic which reflects how deeply you have thought about the question. Preview of components and the relationships.  |
| Component:Elaborate:Support with example/s:Component:Elaborate:Support with example/s: | Topic sentence at the beginning of each paragraph followed by explanations and examples to illustrate each component Identifying and explaining the relationship between the various components is essential in answering these questions. Use linking words between each point such as *therefore, thus, as a result, leading to*, in order to illustrate the relationship between each of the components.  |
| RelationshipPointElaborate:Support with example/s:Link: |
| Component:Elaborate:Support with example/s:Component:Elaborate:Support with example/s: |
| RelationshipPointElaborate:Support with example/s:Link: |
| Implications of the relationship between each of these components:  | The implications of the relationship (what happens, what effect it has) can be dealt with in each of the paragraphs or as a concluding paragraph.  |

1. How does the combination of heat and humidity increase the likelihood of hyperthermia? **8 marks**

|  |
| --- |
| **Introduction:** |
| **Topic** | **Paragraph** |
|  | Statement: |
| Expand/Explain:  |
| Apply/Example: |
| Link/Why: |
|  | Statement: |
| Expand/Explain:  |
| Apply/Example: |
| Link/Why: |
|  | Statement: |
| Expand/Explain:  |
| Apply/Example: |
| Link/Why: |
| **Conclusion:** |

1. How does the combination of cold and wind increase the likelihood of hypothermia? **8 marks**

|  |
| --- |
| **Introduction:** |
| **Topic** | **Paragraph** |
|  | Statement: |
| Expand/Explain:  |
| Apply/Example: |
| Link/Why: |
|  | Statement: |
| Expand/Explain:  |
| Apply/Example: |
| Link/Why: |
|  | Statement: |
| Expand/Explain:  |
| Apply/Example: |
| Link/Why: |
| **Conclusion:** |

1. 2013 Question 31 (b) Why are acclimatisation and fluid intake effective strategies for supporting the body’s temperature regulation mechanisms?  **12 Marks**

**Scaffold for critically evaluate**

*Critically evaluate* – add a degree or level of accuracy, depth, knowledge and understanding, logic, questioning, reflection and quality to *evaluate.*

*Evaluate* - make a judgement based on criteria; determine the value of.

|  |  |
| --- | --- |
| Topic to be evaluated:  | **Tips for writing**Statement of topic to be critically evaluated. Preview of points for and against and concluding judgement.  |
| Point for:Elaborate:Support with examples:Link: | Topic sentence at the beginning of each paragraph followed by explanation and examples to illustrate point. Points could also be advantages and disadvantages instead of for and against. Use linking words (such as: therefore, because, however, for instance, for example, as a result). Criteria used to make a judgement could be used during the points for and against to illustrate unclear reference more clearly.  |
| Point for:Elaborate:Support with examples:Link: |
| Point against:Elaborate:Support with examples:Link: |
| Point against:Elaborate:Support with examples:Link: |
| Criteria used to assess points for and against: |
| Conclusion and **judgment**: | Brief summary of points for and against. Must make a judgement at the end either for OR against the argument and draw conclusions regarding about support for or against issue through the use of a criteria.  |

**Use the marking criteria and sample answer below to mark yours, or a friends answer and record ways to improve your answer.**

|  |  |
| --- | --- |
| **Criteria** | **Marks** |
| * Demonstrates a clear understanding of acclimatisation and fluid intake strategies in regulating the body’s temperature
* Makes a clear judgement and determines the value of acclimatisation and fluid intake strategies being used to regulate the body’s temperature
* Provides examples to support the judgement
 | 11–12 |
| * Demonstrates an understanding of acclimatisation and fluid intake strategies in regulating the body’s temperature
* Provides reasons why acclimatisation and fluid intake strategies are being used to regulate the body’s temperature
* Provides examples
 | 9–10 |
| * Provides characteristics and features of acclimatisation and/or fluid intake strategies used to regulate the body’s temperature
 | 6–8 |
| * Sketches in general terms acclimatisation and/or fluid intake as strategies used to regulate the body’s temperature
 | 3–5 |
| * Provides facts or information about acclimatisation and/or fluid intake
 | 1–2 |

**Sample answer:**

Acclimatisation is a key strategy athletes use to regulate their body temperature in different climatic conditions. Acclimatisation to heat is a process by which an athlete becomes accustomed to increased heat over the course of 4–14 days prior to competition. Heat acclimatisation involves both the initial acclimatisation period of being in the location where the event/sport will be competed and also the training practices employed in that location prior to competition. An example of this was the most recent Commonwealth Games held on the sub-continent of India. India's climate is much hotter and more humid than Australia. Therefore to combat the heat and humidity of India and the associated increased sweating, loss of body fluid and increased body temperature that most Australian athletes would experience a period of heat acclimatisation prior to the Games was necessary.

In order to regulate their temperature prior to the Commonwealth Games, Australian athletes while still in Australia would have trained in ‘heat rooms’ and during hotter parts of the day to adjust their body’s regulation processes to the anticipated climate conditions. This enables the body’s mechanisms to adjust and aid the athlete to experience the increased body temperature in India. While in India many athletes trained using ice vests in the early stages of their arrival in the country to allow their body to gradually adjust to the new climatic conditions. This is a well proven and vital strategy used by athletes to ensure maximum performance is not decreased through having hyperthermia and/or de-hydration/heat stroke from not adequately preparing for the climatic conditions.

Fluid replenishment during sport is a controversial topic regarding how well it allow athletes to cope with a variety of climatic conditions. There is debate over the effectiveness of water versus the popularised sports drinks and even vitamin waters. We know that athletes should at least replenish their weight loss during exercise with water ie for every kilo lost, replenish with 1 litre of water. This is important because being dehydrated decreases the body’s ability to regulate core temperature. This is vitally important in areas where the climatic conditions are severe or vastly different to the areas an athlete would usually compete or train in such as higher or lower altitudes, different hemispheres etc. The body would not be used to regulating its temperature under pressure in these situations and without adequate hydration this would place the body under further stress, possible harm and reduce performance.

Acclimatisation is by far the most effective strategy an athlete can use in both hot and cold climatic conditions. This is because it promotes an internal adaptation and prevents the risk of all heat related illnesses.

# Taping and Bandaging

|  |  |
| --- | --- |
| **Students learn about:** | **Students learn to:** |
| * taping and bandaging
* preventative taping
* taping for isolation of injury
* bandaging for immediate treatment of injury.
 | * demonstrate taping and bandaging techniques, including taping the ankle, wrist and thumb
* evaluate the role taping plays in both the prevention and treatment of injury.
 |

## Content

**Video** *Taping and Bandaging* [here](https://youtu.be/KcrjhTYukac?list=PLesvqngPCeVM83T9yIZXK3la6P4i6fxFy).

**Reading** [pdhpe.net](https://www.pdhpe.net/sports-medicine/what-role-do-preventative-actions-play-in-enhancing-the-wellbeing-of-the-athlete/taping-and-bandaging/)

 Relevant section of your textbook (Cambridge, Outcomes, etc)

## Cornell Note Taking Method

*These notes can be done in the booklet or in a separate exercise book (replace the words in the scaffold).*

|  |
| --- |
| Name, Date, Topic, Class |
| **CUES**Written after the video and classMain ideasQuestions that connect pointsVocabulary wordsUsed for review and study | **NOTES**Taken During the video* Main points
* Bullet points
* Diagrams/charts
* Abbreviate
* Paraphrase
* Outlines

Leave space between topicsAny Questions you still have. |
| **SUMMARY**Written straight after the video. (Checked in class)Brief summary highlighting the main points on the page.Used to find info later. |

## Learn to Activity

### Practical activity

Watch the following videos on taping for the:

1. [Wrist](https://youtu.be/6DUhP8_KkG0?list=PLesvqngPCeVPrm3uuUUh23FC9CgOfbQPF)
2. [Ankle](https://youtu.be/0LpGDkiyvaQ?list=PLesvqngPCeVPrm3uuUUh23FC9CgOfbQPF)
3. [Thumb](https://youtu.be/1ydvON1PmjE?list=PLesvqngPCeVPrm3uuUUh23FC9CgOfbQPF)

Practice taping the wrist, ankle and thumb in pairs or groups of 3. You will need the following resources:

* Masking tape or rigid tape
* Compression bandage

### Evaluate taping and bandaging

1. Identify points for and against taping and bandaging for the prevention and treatment of injury, using the table below

|  |  |  |
| --- | --- | --- |
|  | Taping | Bandaging |
| For |  |  |
| Against |  |  |

**Research activity**

1. Do a Google search to find information on the **effectiveness** of taping and bandaging to treat or prevent injury. Put the information you find into the table below.

|  |  |
| --- | --- |
| Reference (include link to where it was found) | Information from the reference |
|  |  |
|  |  |
|  |  |

1. Conduct a search on Google, using the advanced search options to find educational articles or pages written by educational people (professionals, Doctors, Professors, professional organisations etc) above the effectiveness of taping and bandaging in preventing or treating injury. (some suggested places where you might find information include: ESSA, SMA, ACSM, etc.
	1. Add your findings to the table above.
	2. See if you can find information on the effectiveness of kinesiotaping and put it into a separate table below.

|  |  |
| --- | --- |
| Reference (include link to where it was found) | Information from the reference |
|  |  |
|  |  |
|  |  |

1. Select the most trustworthy reference and justify why it is worthy of trust.
2. Use the above information to evaluate the use of taping and bandaging in the prevention and treatment of injury. (you can use the scaffold below if needed)

**Scaffold for critically evaluate**

*Critically evaluate* – add a degree or level of accuracy, depth, knowledge and understanding, logic, questioning, reflection and quality to *evaluate.*

*Evaluate* - make a judgement based on criteria; determine the value of.

|  |  |
| --- | --- |
| Topic to be evaluated:  | **Tips for writing**Statement of topic to be critically evaluated. Preview of points for and against and concluding judgement.  |
| Point for:Elaborate:Support with examples:Link: | Topic sentence at the beginning of each paragraph followed by explanation and examples to illustrate point. Points could also be advantages and disadvantages instead of for and against. Use linking words (such as: therefore, because, however, for instance, for example, as a result). Criteria used to make a judgement could be used during the points for and against to illustrate unclear reference more clearly.  |
| Point for:Elaborate:Support with examples:Link: |
| Point against:Elaborate:Support with examples:Link: |
| Point against:Elaborate:Support with examples:Link: |
| Criteria used to assess points for and against: |
| Conclusion and **judgment**: | Brief summary of points for and against. Must make a judgement at the end either for OR against the argument and draw conclusions regarding about support for or against issue through the use of a criteria.  |

## Common Terms

Read the article on “[Common Terms](https://www.pdhpe.net/common-terms/)” (who, what, when, where, why, and how?) to understand how to interpret the HSC questions that don’t use the key words. Create a summary of the terms below.

|  |  |
| --- | --- |
| **Term** | **Notes** |
| *What* |  |
| *How* |  |
| *Why* |  |
| *To what extent* |  |

## Past/Practice HSC Questions

1. How effective is taping in the prevention and treatment of injuries? Justify your answer and provide examples. **8 Marks**

**Basic Scaffold**

|  |
| --- |
| **Introduction:** |
| **Topic** | **Paragraph** |
|  | Statement: |
| Expand/Explain:  |
| Apply/Example: |
| Link/Why: |
|  | Statement: |
| Expand/Explain:  |
| Apply/Example: |
| Link/Why: |
|  | Statement: |
| Expand/Explain:  |
| Apply/Example: |
| Link/Why: |
| **Conclusion:** |

1. 2014 Question 31 (a) To what extent is taping effective in preventing sports injuries? **8 Marks**

**Write your answer here.** (Try without a scaffold. If you need, you can use the analyse scaffold above)

* 1. **After** writing your answer you should use the marking criteria and sample answer to mark your own answer and make adjustments,

**Question 31 (a) Marking Criteria**

|  |  |
| --- | --- |
| **Criteria** | **Marks** |
| * Makes judgements about the effectiveness of taping to prevent sports injuries
* Provides points for and against the use of preventative taping
* Provides relevant examples
 | 8 |
| * Provides points for and/or against the use of preventative taping
* Provides relevant examples
 | 6–7 |
| * Provides characteristics and features of preventative taping
* Provides relevant examples
 | 4–5 |
| * Sketches in general terms the role of preventative taping
 | 2–3 |
| * Provides an example of how taping is used in sport
 | 1 |

***Sample answer:***

Taping can play a significant role in preventing injury. Taping can protect, support or strengthen a joint during movement. Sports such as basketball, soccer and netball that require agility, speed, power can place considerable stress on joints. These sports demand explosive movements and frequent changes of direction, so the joints at times will endure high levels of stress. With this in mind, there is potential for injury so therefore prophylactic (preventative) taping can be employed to prevent injury.

If an injury has been sustained taping is required and is a necessity during the rehabilitation process. Taping permits an athlete to participate in body conditioning exercises to maintain fitness as much as they can during recuperation. For example, a knee injury may be healed, but requires testing in training. In these circumstances, support can be provided while the injured area becomes accustomed to the demands of the full activity and therefore prevent any further injury from occurring.

However, there are some disadvantages to the use of taping to prevent injury. Individuals can develop a reliance on taping which can restrict a range of motion and reduce an athlete’s proprioception.

Despite some limitations, most professional athletes such as AFL and NRL players are required by their clubs to use preventative taping measures on high mobility joints (such as ankles) to prevent injury.

**AND**

* 1. a partners work providing feedback

**Record the feedback you got here and who wrote it.**